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Practices and Challenges Encountered by Secondary Mathematics Teachers in Limited Face-To-Face Learning Modality in Zone IV, Division of Zambales

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Abstract— *This research studied the practices and challenges encountered by Secondary Mathematics teachers during limited face-to-face learning modality in Zone IV, Division of Zambales for the school year 2021–2022. It utilized a descriptive quantitative research design with a questionnaire as the main instrument. Results showed that teachers strongly agreed on the indicated practices on Health and Safety Protocols; Accessibility, Teacher Performance; Teaching Strategy, and ICT Access and Use. They disagreed with challenges related to Class Scheduling, Teaching and Learning Delivery, Assessment of Students' Performance; but agreed that Class structuring and Management posed difficulties for effective discussions and student engagement. However, there is no significant difference between the appraised practices and challenges when grouped according to age, gender, teaching position, years in teaching, and average number of hours rendered in mathematics class weekly. There exist significant differences on the perceived practices among respondents handling Grades 7, 10, and 11. Post Tukey HSD tests and the Games-Howell test indicate that Grade 7 and Grade 11 groups differ significantly with their perceived practices of limited face-to-face modality. Therefore, the grade level to which the teachers are assigned has an impact on how they perceive the implementation of the limited face-to-face modality. Lastly, there is no significant relationship between assessed practices and perceived challenges faced by the teachers in the conduct of limited face-to-face learning modality and the correlation that was established was negligible negative correlation, suggesting that teachers who strongly agreed on the indicated practices tend to have low perceived challenges.*

Keywords— ***limited face-to-face learning, teaching practices, perceived challenges, secondary mathematics teachers, grade level differences***

I. INTRODUCTION

The Corona Virus Disease (Covid-19) pandemic greatly affects education around the world. Many countries have decided to temporarily close schools that have affected millions of students since the outbreak and threat of the pandemic. As an urgent response to ensure continuity of education in the Philippines, the Department of Education (DepEd) has started Distance Learning on October 5, 2020. According to Quinones (2020), distance Learning refers to a learning delivery modality, where learning takes place between the teacher and the learners who are geographically remote from each other during instruction. This modality has three types: Modular Distance Learning (MDL), Online Distance Learning (ODL), and TV/Radio-Based Instruction.

World Health Organization (WHO, 2020) states that School closures have clear negative impacts on child health, education and development, family income and the overall economy. Consequently, the pandemic has aggravated the global learning crisis more than had been anticipated (World Bank, United Nations Educational, Scientific and Cultural Organization, & United Nations International Children's Emergency Fund, 2021). In relation to this, every country is responsible for devising strategies for reopening schools in a secure manner (Fernandez-Guzman, Sangster-Carrasco, & Pinedo-Soria, 2021). School reopening should be prioritized over reopening other elements of society (Viner, Bonell, Drake, Jourdan, Davies, Baltag, Jerrim, Proimos, & Darzi, 2021).

In January 2020, most schools in China, where the COVID-19 outbreak began, were closed for the Chinese

New Year holidays, and reopened in April 2020 for graduating classes in high schools (Australian Government-Department of Education, Skills and Employment, 2020). Denmark was the first European country to restart schools after closure, allowing municipalities to reopen schools as early as April 15, 2020. Norway allowed daycare and preschools to open on April 20 and Grades 1–4 (ages 6–11) on April 27 in regions with low infection rates (Melnick, Darling-Hammond, Leung, Yun, Schachner, Plasencia, & Ondrasek, 2020). A Sept. 8 report by the United Nations Children's Fund identified the Philippines and Venezuela as the two remaining countries that have yet to return to in-person classes. On Oct. 25, Venezuela resumed face-to-face classes for its more than 11 million students (Bautista, 2021). After almost 2 years of distance learning, even as the COVID-19 pandemic persists, DepEd allows limited face-to-face classes. The Philippines, one of the most virus-hit countries in Asia, was the last country in the world to reopen schools for in-person classes since the World Health Organization declared a pandemic in March 2020. According to DepEd Memorandum no. 071, s. of 2021, 59 public schools started the pilot face-to-face classes on November 15, 2021. In SDO- Zambales, there are ten participating schools namely, San Marcelino National High School (NHS) Annex and Baliwet Elementary School (ES) in San Marcelino, Banawen ES in San Felipe, and Belbel ES, Burgos ES, Burgos ES, Maguisguis ES, Moraza ES, Nacolcol Integrated School (IS), Owaog Nebloc ES, and Palis IS.

On February 2, 2022, given President Rodrigo Duterte's approval of the recommendation for the progressive expansion of face-to-face classes, Education Secretary Leonor Magtolis Briones authorized all regional directors to commence the progressive expansion phase of face-to-face classes for both public and private schools (DepEd, 2022). SDO- Zambales is the first division that 100% or 313 public schools opened limited face-to-face classes. Implementing limited face-to-face classes even though there are still active cases of COVID-19 is a positive step before the full implementation of face-to-face classes, but the Department of Education shared the various challenges experienced by teachers and students (Hernando-Malipot, 2021). In TIMSS 2019, the Philippines ranked last among 58 countries in math and science, according to Banerjee (2022), there is a learning crisis before the pandemic and according to World Bank, UNESCO, and UNICEF (2021), the pandemic has exacerbated this learning crisis and children in almost every country have fallen behind in their learning. The world bank (2019) stated that the teacher should enrich and transform students' lives despite all challenges. Thus, there is a need to determine if mathematics teachers are ready or prepared and equipped with the right skills and knowledge to address the challenges on Limited Face-to-Face Learning Modality during pandemic. In this light, teachers are in need of continuous professional development, assistance and resources/equipment to be able to provide quality education for the learners during pandemic. Lastly, the researcher investigated the practices and the challenges of the face-to-face learning modality to come up with the program that will prepare teachers to perform their task and be ready to face challenges they might experience during the conduct of face-to-face learning modality during pandemic.

II. METHODOLOGY

A. Research Design

In this study, the researcher used a Descriptive Design to describe and investigate the practices and the challenges of the face-to-face learning modality to come up with a program that will prepare teachers to perform their tasks and be ready to face challenges they might experience during the conduct of face-to-face learning modality during a pandemic.

B. Respondents and Location

The respondents of the research study are the secondary mathematics teachers of Zone 4, DepEd Division of Zambales. Table 1 below shows the frequency distribution of the respondents by school.

Table 1: Distribution of the Teacher – Respondents from Secondary Schools of Zone 4, Division of Zambales

Public Secondary Schools	**Teachers *(f)***
1. Laoag Integrated School	3
2. San Guillermo National High School	10
3. San Rafael High School	2
4. Castillejos National High School	15
5. Castillejos Resettlement High School	2
6. Hanjin Integrated School	2
7. Jesus F. Magsaysay Technological Vocational High School	3

8. San Agustin High School	3
9. Aningway-Sacatihan High School	2
10. Calapandayan Integrated School	3
11. Ilwas High School	4
12. Pamatawan Integrated School	2
13. San Isidro High School	5
14. Subic National High School	20
Total	**76**

As shown in Table 1, a total population of seventy-six (76) secondary mathematics teachers are identified as respondents of the study. Teacher respondents are all employed among fourteen (14) schools of Zone 4, Division of Zambales. The study will be conducted at Public High Schools of the three (3) Districts (San Marcelino District, Castillejos District, and Subic District) of Zone 4, DepEd Division of Zambales. San Marcelino District includes Laoag Integrated School, Brgy. Laoag, San Marcelino; San Guillermo National High School, Brgy. San Guillermo, San Marcelino; and San Rafael High School, Brgy. San Rafael, San Marcelino. Castillejos District includes Castillejos National High School, Brgy. San Roque, Castillejos; Castillejos Resettlement High School, Brgy. Balaybay, Castillejos; Hanjin Integrated School, Brgy. Magsaysay, Castillejos; Jesus F. Magsaysay Technological Vocational High School, Brgy. San Jose, Castillejos; and San Agustin High School, San Agustin, Castillejos. Subic District includes Aningway-Sacatihan High School, Brgy. Aningway-Sacatihan, Subic; Calapandayan Integrated School, Brgy. Calapandayan, Subic; Ilwas High School, Brgy. Ilwas, Subic; Pamatawan Integrated School, Brgy. Pamatawan, Subic; San Isidro High School, San Isidro, Subic; and Subic National High School, Mangan-vaca, Subic.

C. Research Instrument

This study employed a research-made survey questionnaire. The survey questionnaire was composed of three parts. Part 1 identified the teacher-respondents' profiles, including age, sex, grade level handled, years in teaching, and teaching position. Part 2 determined the practices of the respondents on a limited face-to-face learning modality. Part 3 determined the challenges of the respondents in the limited face-to-face learning modality. Parts 2 and 3 used a four-point scale from 4 (strongly agree), 3 (agree), 2 (disagree), and 1 (strongly disagree). For the validation of the instrument, the researcher sought the approval of experts in terms of content, face, and construct. The enhanced and modified proposed survey questionnaire was field tried out for testing among secondary math teachers in Zone 1 to 3 of the Division of Zambales. Lastly, Cronbach Alpha was determined with a reliability index of 0.892309 (good) for Practices and 0.913573 (excellent) for Challenges. This means that the survey questionnaire was reliable.

D. Data Gathering Procedure

A letter of request to the Schools Division Superintendent, DepEd Division of Zambales, was written to ask permission to conduct research among the teacher-respondents to gather relevant and pertinent data. After the request was approved, another letter requests were prepared for the School Principal/ School Head of school respondents seeking their assistance during the distribution of the survey questionnaire in a Google form. The survey questionnaire was distributed during the fourth quarter of the school year 2021-2022. The respondents were given enough time to answer the questionnaire. Data that were collected were tabulated and analyzed.

E. Data Analysis

After retrieving the disseminated survey questionnaires, the data was tallied and tabulated following the objectives of the study. The data was analyzed using statistical tools. The percentage was computed to present the profile of the respondents. The frequency was utilized to determine the distribution of responses to a specific question or items in the survey questionnaires. The Weighted Mean is the average score of the observations. This was calculated to determine the respondents' overall perceptions. The Analysis of Variance was used to test the significant difference between the assessed practices and perceived challenges in limited face-to-face learning modality by the respondents when grouped according to profile. The Pearson r Correlation was used to test the significant relationship between the assessed practices and perceived challenges in limited face-to-face learning modality by the respondents.

III. RESULTS AND DISCUSSION

1. Profile of the Teacher-Respondents

Table 2 shows the frequency and percentage distribution of the teacher-respondents as to their age, sex, teaching position, grade level handled, years in teaching, and Average number of hours rendered in a Mathematics class weekly.

Table 2: Frequency and Percentage Distribution of the Teacher-Respondents' Profile

Age	Frequency	Percent
56 to 60 years old	2	2.63
51 to 55 years old	8	10.53
46 to 50 years old	6	7.89
41 to 45 years old	10	13.16
36 to 40 years old	19	25
31 to 35 years old	12	15.79
26 to 30 years old	12	15.79
21 to 25 years old	7	9.21
Total	**76**	**100.00**
Mean = 37.80		
Sex	**Frequency**	**Percent**
Male	28	36.84
Female	45	59.21
Prefer not to say	3	3.95
Total	**76**	**100.00**
Teaching Position	**Frequency**	**Percent**
Master Teacher 2	2	2.63
Master Teacher 1	1	1.32
Teacher 3	19	25
Teacher 2	14	18.42
Teacher 1	40	52.63
Total	**76**	**100.00**

Grade Level Handled	Frequency	Percent
Grade 11	10	13.16
Grade 10	19	25
Grade 9	19	25
Grade 8	12	15.79
Grade 7	16	21.05
Total	**76**	**100.00**
Years in Teaching	**Frequency**	**Percent**
31 to 35 years	2	2.63
26 to 30 years	1	1.32
21 to 25 years	6	7.89

16 to 20 years	7	9.21
11 to 15 years	13	17.11
6 to 10 years	23	30.26
1 to 5 years	24	31.58
Total	**76**	**100.00**
Average Number of Hours rendered in a Mathematics Class Weekly	**Frequency**	**Percent**
More than 5 hours	40	52.63
5 hours	18	23.68
4 hours	12	15.79
3 hours	2	2.63
2 hours	2	2.63
1 hour	2	2.63
Total	**76**	**100.00**

The age of the 76 Secondary Mathematics teacher respondents, there are 19 or 25.00%, who belong to 36 to 40 age group. It was followed by 12 (15.79%) teachers who are at 31-35 and 26-30 age groups respectively; 8 or 10.53%, 51-55 age group; 7 (9.21%) 21-25 age group; 6 (7.89%), 46-50 age group; and 2 (2.63%) who belong to age brackets of 56-60. The mean age was 37.80. This particular age falls under the category of middle adulthood or midlife. Middle adulthood ranges from 35 to 50 years old who frequently accommodates greater life obligations. According to Chiang and Wang (2014), the matured age group is a viable source for potential educators and Heinz (2013) stated that in comparison to their younger counterparts, teacher candidates over the age of 30 do better during teaching practice. Moreover, the result of the present study is consistent with the data obtained in the study of Campilla and Castañaga (2021) and Francisco (2020) on age profile variables. Their respondents belong to the age bracket (31-40) or middle adulthood.

The sex of 76 Secondary Mathematics teacher respondents, 45 or 59.21% are female, 28 or 36.84% are male and 3 or 3.95% prefer not to say their sex. This means that majority of secondary mathematics teacher respondents of the present study are represented by women. Teaching has become a feminized profession, especially in elementary teaching, in which it is regarded as women's work (Bongco & Ancho, 2020). This is particularly evident at the primary school level, where, as of 2017, data from the World Bank (2024) shows that 65.73% of instructors are female. The same is true in the Philippines, where as of 2016, 87.54% of primary school teachers were female (World Bank Data, retrieved August 2019). As per data from the World Bank, there are increasingly more women working as teachers. Moreover, the result of the present study is consistent with the data obtained in the study of Regalado (2017) and Bongco and Ancho (2020) on sex profile. Their respondents belong to the female group.

Forty (40) or 52.63% are Teacher 1; 19 or 25% are Teacher 3, 14 or 18.42% are Teacher 2, 2 or 2.63 are Master Teacher 2, and 1 or 1.32 are Master Teacher 1. According to Regalado (2017), available items in the Department of Education (DepEd) are relatively few, the promotions are rare in the DepEd and if there are promotions it is usually kept to the barest minimum. Moreover, the result of the present study is consistent with the data obtained in the study of Regalado (2017), and Dela Fuente (2020), most of the teachers belong to Teacher 1 position.

Out of 76 Secondary Mathematics teacher respondents, 19 or 25% are teaching Grade 9 and 10 respectively; followed by 16 or 21.05% are teaching Grade 7; 12 or 15.79% are teaching Grade 8; and 10 or 13.16 are teaching Grade 11. This particular result is consistent with Antipolo and Rogayan (2021), the result shows that the greater number of respondents handled Grade 8, 9 and 10.

There are 24 or 31.58% whose teaching experience is 1-5 years; followed by 23 or 30.26% have 6-10 years in teaching; 13 or 17.11% have 11-15 years in teaching; 7 or 9.21 have 16-20 years in teaching; 6 or 7.89% have 21-25 years in teaching; 2 or 2.63% have 31-35 years in teaching; and 1 or 1.32% has 26-30 years in teaching. Moreover, the result of the present study contradicts with the result in the study of Rodríguez-Muñiz, Burón, Aguilar-González and Muñiz-Rodríguez (2021) wherein 75.4% of the sample had

more than 10 years of experience and only 9.4% had less than three years of experience and according to Stoilescu and McDougall (2015), 90% of the mathematics teachers have at least 5 years of teaching experience.

Out of 76 Secondary Mathematics Teachers, 40 or 52.63% rendered more than 5 hours in a mathematics class weekly; 18 or 23.68% rendered 5 hours; 12 or 15.79 rendered 4 hours; and 2 or 2.63 rendered 3 hours, 2 hours, and 1 hour, respectively in a mathematics class weekly. DepEd Memorandum no. 291, s. 2008 stated that public school teachers shall render at most six hours of actual classroom teaching a day, except when undertaking academic activities that require presence outside the school premises. According to DepEd order no. 30, s. 2022 and DepEd order no. 71 s. 2021, the school has designed class programs that cater both learners of the face-to-face class arrangement and distance education while observing the maximum 6-hour classroom teaching hours of teachers and has developed a teaching schedule that follows the 5-hour minimum contact time for teaching and learning. DepEd Order number 31, s. 2012 states that the time allotment for the mathematics class is 4 hours weekly.

2. Level of Agreement of Mathematics Teacher-Respondents with the Practices in Limited Face-to-Face Learning Modality

Table 3 shows that practice on Health and Safety Protocols (Strongly Agree, 3.74 ranked 1st); practices on Teacher Performance (Strongly Agree, 3.70 Ranked 2nd); practices on Teaching Strategy (Strongly Agree, 3.54 ranked 3rd); practices on ICT Access and Use (Strongly Agree, 3.53 ranked 4th); and practices on Accessibility (Strongly Agree, 3.52 ranked 5th).

Table 3: Level of Agreement of Mathematics Teacher-Respondents with the Practices in Limited Face-to-Face Learning Modality

Practices in Limited Face-to-Face Learning Modality	Weighted Mean	Qualitative Rating	Rank
1. Health and Safety Protocols	3.74	Strongly Agree	1
2. Accessibility	3.52	Strongly Agree	5
3. Teacher Performance	3.70	Strongly Agree	2
4. Teaching Strategy	3.54	Strongly Agree	3
5. ICT Access and Use	3.53	Strongly Agree	4
Overall Weighted Mean	**3.61**	**Strongly Agree**	

Overall, the mathematics teacher-respondents Strongly Agreed with the practices on Limited Face to face Learning Modality pertaining to Health and Safety Protocols; Accessibility; Teacher Performance; Teaching Strategy and ICT Access and Use in Limited Face-to-Face Learning Modality. The summary on the perceptions with the practices of the limited face-to-face learning modality is strongly agreed. Education is the gateway to life, leading to a world full of knowledge, awareness, empowerment, and opportunities. Creating a secure educational environment is critical for increasing student engagement, active participation, and overall achievement. A student who is nurtured and supported in a safe environment will thrive and emerge as confident, sensitive human beings of the future (Jisu, 2023). According to Mubita, Milupi, and Kalimaposo (2023), safety and health management in schools are essential for providing safe and healthy learning environments for both students and teachers, as they improve academic performance, reduce absenteeism, and improve learners' mental and physical health outcomes.

3. Level of Agreement of Mathematics Teacher-Respondents with the Challenges in Limited Face-to-Face Learning Modality

Table 4 shows that Classroom Structuring and Management (Agree, 2.51 ranked 1st); Assessment of Student's Performance (Disagree, 2.30 Ranked 2nd); Class Scheduling (Disagree, 2.16 ranked 3rd); and Teaching and Learning Delivery (Disagree, 1.92 ranked 4th). Overall, the mathematics teacher-respondents Disagreed with the challenges in Limited Face-to-Face Learning Modality on Class Scheduling, Teaching and Learning Delivery, Assessment of Student's Performance and agreed that class structuring and Management cause a threat on the effective classroom discussion and student's participation or engagement. Foster's (2022) study revealed that effective classroom structuring and management can foster a positive learning environment that supports academic, social, and emotional learning; facilitate a structured and organized environment in which students can focus on learning; build trust and healthy relationships between instructor and students, as well as peer-to-peer among students; maintain

attention and foster motivation and engagement; and minimize disruption and interference with learning.

Table 4: Level of Agreement of Mathematics Teacher-Respondents with the Challenges in Limited Face-to-Face Learning Modality

Challenges in Limited Face-to-Face Learning Modality	Weighted Mean	Qualitative Rating	Rank
1. Classroom Structuring and Management	2.51	Agree	1
2. Class Scheduling	2.16	Disagree	3
3. Teaching and Learning Delivery	1.92	Disagree	4
4. Assessment of Student's Performance	2.30	Disagree	2
Overall Weighted Mean	**2.22**	**Disagree**	

As stated in DepEd-DOH Joint Memorandum Circular No. 1, s. 2021, during the implementation of the Limited Face-To-Face Learning Modality, classrooms must be set up following the prescribed classroom layout to ensure learners' safety from COVID-19 transmission while the learners should follow the proper physical distancing and the schools should consider providing microphones or other appropriate sound systems for teachers to facilitate teaching in a physically distanced setup so that students can easily hear and understand the lessons. Briones (2020), household resources affect the learning development of students due to income, educational background, family members, limited internet connections, availability of background and gadgets, number of family members and work situations of family members especially the adults or specifically parents. Students are noted to have difficulty without the assistance of teachers. Thus face-to-face is more preferred than the distance or modular mode of learning. And also, the limited time allotted on face-to-face learning also affects majority of the students across households.

4. Test of significant difference on perceived practices in the conduct of limited face-to-face learning modality among the respondents when grouped according to profile.

Table 5: Test of Significant Difference on Perceived Practices of Limited Face-to-Face Learning Modality Among the Respondents When Grouped According to Profile Variables

Sources of Variation		Df	F	Sig	Decision/ Interpretation
Age	Between Groups	7	0.769	0.615	Accept Ho Not Significant
	Within Groups	68			
	Total	75			
Gender	Between Groups	2	0.042	0.959	Accept Ho Not Significant
	Within Groups	73			
	Total	75			
Teaching Position	Between Groups	4	0.941	0.446	Accept Ho Not Significant
	Within Groups	71			
	Total	75			
Grade Level Handled	Between Groups	4	2.914	0.027	Reject Ho Significant
	Within Groups	71			
	Total	75			
Years in Teaching	Between Groups	5	1.464	0.213	Accept Ho Not Significant
	Within Groups	70			
	Total	75			

Average number of hours rendered in a Mathematics class weekly.	Between Groups	5	0.952	0.453	Accept Ho Not Significant
	Within Groups	70			
	Total	75			

The results indicate that there is a significant difference in the perceived practices by the teacher-respondents in the conduct of limited face-to-face learning modality of mathematics teacher respondents when grouped according to grade level handled (F= 2.914, p =0.027). However, no significant differences were found based on age (F = 0.769, p = 0.615), gender (F = 0.042, p = 0.959), teaching position (F = 0.941, p = 0.446), years in teaching (F = 1.464, p = 0.213), or average number of hours rendered in a mathematics class weekly (F = 0.952, p = 0.453). This shows that teacher of different year levels had different appraisal with the practices in the conduct of limited face-to-face learning modality. This implies that students have direct impact on how teacher perform their task with the implemented health and safety protocols, accessibility, teacher performance, teaching strategy and ICT access and use. Thus, the result implies that there is substantial statistically detected difference on appraise practices in limited face-to-face learning modality of mathematics teacher respondents when grouped according to grade level handled.

Since the test of difference on the perceived practices of limited face to face modality of teachers when grouped according to grade level handled is significant ($p = 0.027$), a post hoc analysis was conducted to determine which among the groups have significant difference. Both Tukey HSD (assuming equal variances) and Games-Howell (assuming unequal variances) yield the same result. Post Tukey HSD tests and Games-Howell test indicate that Grade 7 and Grade 11 groups differ significantly with their perceived practices of limited face to face modality ($p = 0.007$) and Grade 11 and Grade 10 is also significant ($p = .004$) with p value less than 0.05. Therefore, the grade level which the teachers are assigned has an impact on how they perceived the conduct or implementation of the limited face to face modality.

In the study of Albduor (2015), the grade 7th students faced difficulty in reading comprehension in English, similar to mathematics where the medium of instruction is English, students and teachers' communication skills may post significant effect on how the teaching-learning processes become successful. As an important skill to be developed in math class, the language of mathematics must be well taught by the teachers and used by the students. In the study of Flores (2018), teachers faced difficulty in teaching Grade 11 students due to retention of topics learned in the lower levels. He reiterated that internalization of lesson to among students and coordination between schools and parents should be established to address student's difficulty. According to Baes (2019), Grade 10 students in Tuy National High School in Batangas, teachers also faced difficulties in handling mathematics class like the Grade 11 students. Problems identified were in curriculum, learning assessments, learning processes and materials. Evidently, these findings show that teachers handling different grade levels faced different kind of difficulties on handling the class as well as in employing any learning modalities whether face-to-face, online and/or traditional learning modality.

5. Test of significant difference on perceived challenges in the conduct of limited face-to-face learning modality among the respondents when grouped according to profile.

As seen on the table, there was no significant difference in the perceived challenges in the conduct of limited face-to-face learning modality among the respondents when grouped according to age (F= 0.335, p= 0.935), gender (F= 0.624, p= 0.647), teaching position (F=0.725, p=0.725), grade level handled (F=0.624, p= 0.647), years in teaching (F=0.436, p= 0.8220), number of hours rendered in mathematics class (F= 1.496, p= 0.202) which are greater than Alpha level of Significance (0.05), therefore the null hypothesis is accepted. This implies that age, gender, teaching position, grade level handled, years in teaching and average number of hours rendered in mathematics class weekly by mathematics teacher respondents do not have an effect on the perceived challenges of the respondents in the conduct of limited face-to-face learning modality. Thus, the result implies that there is no substantial statistically detected difference on perceived challenges in limited face-to-face learning modality of mathematics teacher respondents when grouped according to profile.

Table 6: Test of Significant Difference on Perceived Challenges of Limited Face-to-Face Learning Modality Among the Respondents When Grouped According to Profile Variables

Sources of Variation		df	F	Sig	Decision/ Interpretation
Age	Between Groups	7	0.335	0.935	Accept Ho Not Significant
	Within Groups	68			
	Total	75			
Gender	Between Groups	4	0.624	0.647	Accept Ho Not Significant
	Within Groups	71			
	Total	75			
Teaching Position	Between Groups	4	0.514	0.725	Accept Ho Not Significant
	Within Groups	71			
	Total	75			
Grade Level Handled	Between Groups	4	0.624	0.647	Accept Ho Not Significant
	Within Groups	71			
	Total	75			
Years in Teaching	Between Groups	5	0.436	0.822	Accept Ho Not Significant
	Within Groups	70			
	Total	75			
Average number of hours rendered in a Mathematics class weekly.	Between Groups	5	1.496	0.202	Accept Ho Not Significant
	Within Groups	70			
	Total	75			
	Within Groups	71			
	Total	75			

Ondras and Alvero (2023) stated that all teachers, elementary and secondary teachers experience challenges during the face-to-face learning modality where in there are still cases of covid 19. These challenges were discovered to pose potential risks to students' learning, impeding their progress and possibly leading to permanent disconnection from school. As emphasized by City University Ajman (2022), teachers face a slew of challenges in the aftermath of the COVID-19 pandemic and despite these challenges, the post-pandemic world provides opportunities for teachers. The post-pandemic world allows teachers to rethink their teaching methods and implement more innovative and creative approaches. The disruption of the traditional classroom model allows teachers to experiment with new teaching strategies and pedagogies. This can help to create a more engaging and dynamic learning environment that better meets the needs of today's students. Teaching can be challenging at times, particularly during the covid-19 pandemic, however as these teachers demonstrated, anything is possible. Teachers dealt with these difficulties using their coping strategies. Even though they faced such challenges, the good news is that as educators, they continued to look for potential solutions to the problems (Agayon, A.J., Agayon, A.K., & Pentang, J., 2022).

6. Test of Relationship Between the Assessed Practices and Perceived Challenges in the Conduct of Limited Face-to-Face Learning Modality

Table 7: Test of Relationship Between the Assessed Practices on Limited Face-to-Face Learning Modality and Perceived Challenges

CORRELATION			Values	Decision	Interpretation
Assessed Practices on Limited Face-to-Face Learning Modality	Perceived Challenges on the Conduct Limited Face-to-Face Learning Modality	Pearson r	- 0. 028	Ho is Accepted.	Low Negative Correlation.
		Sig. (2-tailed)	0.810		
		N	76	Not significant.	

It can be seen that there is a negligible negative correlation indicated by the computed r value of -0.028 between perceived practices and challenges among the respondents in the conduct of limited face-to-face learning modality. The perceived challenges are negatively correlated to the indicated practices in the conduct of limited face-to-face modality. This means that as the practices improved, the challenges faced by the teachers decreases slightly or at a very minimal possibility.

The computed P-value of 0.810 is greater than Alpha Level of Significance (0.05), therefore the null hypothesis is accepted, hence there is no significant relationship between practices and challenges as assessed and perceived by the teachers in the conducted of limited face-to-face learning modality, respectively. These two parameters that may affect the effective delivery of teaching and learning processed in the face-to-face learning modality can be improved and sustained as strongly agreed by the teacher-respondents that affects the conduct of face-to-face learning modality in terms of health and safety protocols; accessibility; teacher performance; teaching strategy; and ICT access. Thus, effective and efficient teaching and learning practices in the conduct of face-to-face learning modality should be sustained and also, can be well planned and designed in order to improve student learning (Alonso-Garcia, Aznar-Diaz, Caceres-Reche, Trujillo-Torres & Romero-Rodriguez, 2019). The insignificant relationship between the strongly agreed upon practices in the conduct of face-to-face learning modality shows no direct impact on the perceived challenges of the teacher respondents. As such, teachers may separately address the pre-empted difficulty and challenges that concern the school's policies and protocols in terms of the implementation of the face-to-face modality in the future as well as the difficulties or challenges the teachers may be facing or may encounter in whatever teaching and learning modality they must employ. Truly, teachers as guide and facilitator of learnings, students can master and understand the needed knowledge and skills (Schreiber and Valle, 2013) especially, in the subject mathematics where devoted teachers can deliver the lesson confidently, correctly and on time despite limited time allotted such as in limited face-to-face learning modality. Thus, when face-to-face modality is implemented when enough time spare for teaching and learning mathematics through the teacher's competency, visibility and accessibility for student's support, the problem brought by the pandemic among student's learning gap can be remedied at least lessened.

IV. CONCLUSIONS

Based on the results and findings of the study, the respondents are middle adult female secondary mathematics teacher, holds Teacher 1 position, serve for 1-5 years of teaching, handling grades 9 and 10 and rendered more than 5 hours in a mathematics class weekly. The mathematics teacher-respondents Strongly Agreed with the practices in Limited Face to face Learning Modality pertaining to Health and Safety Protocols; Accessibility; Teacher Performance; Teaching Strategy and ICT Access and Use in Limited Face-to-Face Learning Modality. The mathematics teacher-respondents Disagreed with the challenges in Limited Face-to-Face Learning Modality on Class Scheduling, Teaching and Learning Delivery, Assessment of Student's Performance and agreed that Class structuring and Management cause a threat on the effective classroom discussion and student's participation or engagement.

There is no significant difference in the appraised practices in the conduct of limited face-to-face learning modalities among respondents when grouped according to age, gender, teaching position, years in teaching and average number of hours rendered in mathematics class weekly, but there is significant difference with the appraised practices on the conduct of limited face-to-face learning modalities among respondents when grouped according to grade level handled. Therefore, the grade level to which the teachers are assigned has an impact on how they perceived the conduct or implementation of the limited face to face modality. There is no significant difference on the perceived

challenges in the conduct of limited face-to-face learning modality among the respondents when grouped according to age, gender, teaching position, grade level handled, years in teaching and average number of hours rendered in mathematics class weekly. There is no significant relationship between practices and challenges faced by the teachers in the conducted of limited face-to-face learning modality and a negative negligible correlation exists. Thus, schools with effective and efficient practices in the conduct of limited face to face learning modality tend to have teachers with high resiliency and receptiveness to anxiety.

V. RECOMMENDATIONS

Provide teachers with sustainable and continuous skills and classroom management training to enhance the quality of teaching and learning delivery across all year level in preparation for full face-to-face learning modality that will address the learning gaps; sustain teacher's resiliency and improve the classroom as learning environment in the new normal period. The school head must provide students and teachers with strong internet connection and ICT facilities in school to access online learning resources for instructional support they can utilize during and after class. Teachers must design follow-up collaborative activities online to enhance social engagement among students which are not met during face-to-face learning modality due to health and safety protocols. Teachers must conduct regular peer coaching and mentoring activities to address and eradicate the challenges and/or problems that can be encountered in handling different grade levels.

School Head must continuously monitor the effective and efficient conduct of teaching and learning delivery in face-to-face learning modality in consonance with health and safety protocols to avoid future learning problems. School Head and Teachers must work collaboratively and harmoniously to attain educational goals and objectives through the consistent observation of efficient and effective practices in the conduct of limited face-to-face learning modality. Future researchers may conduct a follow up study on practices and challenges encountered by secondary mathematics teachers in full Face-to-Face Learning modality to establish comparison and differences of results.

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